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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,869

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Thomas Kothe

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23575

7590

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EXAMINER

SCOTT, ANGELA C

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,869	<b>Applicant(s)</b> KOTHE ET AL.	
	<b>Examiner</b> Angela C. Scott	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/06</u>   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112 & §101*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 provides for the use of the coating of claim 8 as a rock support means, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 provides for the use of the coating of claim 8 as a waterproofing means, but, since the claim does not set forth any steps involved in the method/process, it is unclear what

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method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 provides for the use of the coating of claim 19 as a rock support means or as a waterproofing means, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-12, 15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mills et al. (US 2002/0161071).

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Regarding claims 1-4, 11-12, and 15, Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

Regarding claims 6, 8 and 17, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and an aqueous emulsion (ii), and spraying (putting) the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 5).

Regarding claims 7 and 18-19, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and a dispersible organic polymer (iii), combining the mixture with an amount of water, and spraying the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 6).

Regarding claims 9-10, Mills et al. additionally teaches using the coating of claim 8 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

Regarding claim 20, Mills et al. additionally teaches using the coating of claim 19 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Galer et al. (US 4,350,533).

Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶ 24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

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Mills et al. does not teach that the water absorbing composition contains a stoichiometric surplus of lime. However, Galer et al. does teach cementitious composition comprising extraneous lime (Col. 4, lines 5-25). Mills et al. and Galer et al. are combinable because they are from the same field of endeavor, namely cementitious compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use extraneous lime, as taught by Galer et al., in the composition, as taught by Mills et al., and would have been motivated to do so because Galer et al. teaches that its composition has an increased early strength (Col. 3, lines 50-60).

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Matsuura et al. (JP 2001-163650).

Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

Mills et al. does not teach that the composition contains at least 62 weight % of lime. However, Matsuura et al. does teach a cement quick setting agent that can contain at least 62 weight % of lime when all of the components of the composition are taken together (Abstract). Mills et al. and Matsuura et al. are combinable because they are from the same field of endeavor, namely cementitious compositions. At the time of the invention, a person of ordinary skill in the

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art would have found it obvious to use this amount of lime, as taught by Matsuura et al., in the composition, as taught by Mills et al., and would have been motivated to do so in order to increase the early strength of the composition.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 6-13, and 17-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 10, 14, and 17-20 of copending Application No. 10/585,010. Although the conflicting claims are not identical, they are not patentably distinct from each other because at the time of the invention, a person of ordinary skill in the art would have found it obvious to optimize the rate effective variable of the



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amount of lime in the composition to be at least 95%, more preferably to be 100%, and would have been motivated to do so in order to maximize the early strength of the cementitious composition. Claims 1, 3, and 13 of the instant application correspond to claim 1 of the co-pending application. Similarly, claims 2, 6-12, and 17-20 of the instant application correspond to claims 2-8, 10, 14, and 17-20 of the co-pending application, respectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO/

Supervisory Patent Examiner, Art Unit 1796

12-May-08

/A. C. S./

Examiner, Art Unit 1796